Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte ROBERT FERNANDEZ

Appeal No. 2004-0555
Application No. 09/993,261

ON BRIEF

Before OWENS, WALTZ, and PAWLIKOWSKI, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal is from the final rejection of claims 1 and 2, which are all of the claims in the application.

THE INVENTION

The appellant claims a vehicle cooling system having a compressor driven by an engine such that the speed of the engine determines the speed of the compressor, and having condenser and evaporator cooling fans connected to the AC output from a DC to AC inverter. The appellant states that the conversion from DC to

AC power enables the system to use inexpensive, reliable AC motors to drive the fans (specification, page 1). Claim 1 is illustrative:

1. A cooling system for a vehicle having a low voltage DC electric supply and an engine, the cooling system comprising:
   a) a compressor driven by the engine, so that the speed of the engine determines the speed of the compressor;
   b) a condenser connected to the compressor;
   c) an evaporator connected to the condenser and the compressor;
   d) a DC to AC inverter connected to the low voltage DC electric supply;
   e) a first AC powered fan connected to the AC output of the inverter for cooling the condenser; and
   f) a second AC powered fan connected to the AC output of the inverter for circulating air through the evaporator and the space being cooled.

THE REFERENCE

Matsuda et al. (Matsuda) 4,870,833 Oct. 3, 1989

THE REJECTION

Claims 1 and 2 stand rejected under 35 U.S.C. § 103 as being unpatentable over Matsuda.

OPINION

We reverse the aforementioned rejection. We need to address only the sole independent claim, i.e., claim 1.

Matsuda teaches that it was known in the art to directly drive by a vehicle engine an air conditioner compressor having a condenser connected thereto, and that in such a system the speed of the compressor fluctuates sharply as the engine speed changes

(col. 1, lines 12-40). To provide steady cooling capacity regardless of fluctuations in engine speed, Matsuda places between an engine-driven generator and an air conditioner compressor an inverter which controls the frequency of the power generated by the generator and fed to the compressor (col. 1, lines 42-45 and 55-66). Matsuda discloses placing 1) an inverter (11) between a generator (3) and a compressor (12), a condenser blower (13) and an evaporator blower (16) (figure 1), 2) an inverter (11a) between a generator (3) and a compressor (12), but no inverter between the generator (3) and a condenser blower (13) or an evaporator blower (16) (figure 3), and 3) an inverter (11b) between a generator (3) and a compressor (12), and a separate inverter (11c) between the generator (3) and a condenser blower (13) and an evaporator blower (16) (figure 4). Matsuda does not disclose an embodiment of his invention in which there is no inverter between a generator and a compressor.

The examiner argues that it would have been obvious to one of ordinary skill in the art, if compressor speed fluctuation is not a concern, to drive a compressor directly by an engine, as in the prior art, and to use Matsuda's inverter with condenser and evaporator blowers to provide constant AC power for the blowers and to provide a constant air stream (answer, pages 4-5).

For a *prima facie* case of obviousness to be established, the teachings from the prior art itself must appear to have suggested the claimed subject matter to one of ordinary skill in the art. *See In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976). The mere fact that the prior art could be modified as proposed by the examiner is not sufficient to establish a *prima facie* case of obviousness. *See In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992).

Matsuda discloses, with respect to the embodiment in which an inverter is used with a compressor but not with condenser or evaporator blowers, that the condenser and evaporator blowers, which do not exert a big influence on the air conditioning capacity, are operated at a speed according to the frequency of the power generated by a generator, whereas the compressor, which has a big influence on the air conditioning capacity, is speed controlled by an inverter according to the required air conditioning capacity (col. 4, lines 17-24). The examiner has not explained why, given this teaching, one of ordinary skill in the art would have considered compressor speed fluctuation, which has a big influence on air conditioning capacity, to not be of concern and, therefore, would not have used an inverter with the compressor, while at the same time, knowing that the blowers do

not have a big influence on air conditioning capacity, would have used an inverter to maintain constant power frequency to the blowers so as to provide a constant air stream. Moreover, the examiner has not provided evidence or technical reasoning which shows that one of ordinary skill in the art would have desired a constant air stream when the air temperature is fluctuating sharply (which would result when an inverter is used with the blowers but not with the compressor), rather than desiring a reduced air stream when, due to reduced engine speed, the temperature of the cooled air increases (which would result when no inverter is used with the compressor or the blowers).

The record, therefore, indicates that the motivation relied upon by the examiner for combining Matsuda's disclosed prior art with Matsuda's invention so as to arrive at the appellant's claimed invention comes from the appellant's disclosure rather than coming from the applied prior art. Consequently, the record indicates that the examiner used impermissible hindsight when rejecting the claims. *See W.L. Gore & Associates v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984); *In re Rothermel*, 276 F.2d 393, 396, 125 USPQ 328, 331 (CCPA 1960). Accordingly, we reverse the examiner's rejection.

DECISION

The rejection of claims 1 and 2 under 35 U.S.C. § 103 as being unpatentable over Matsuda is reversed.

REVERSED

Terry J. Owens
Administrative Patent Judge)

Thomas A. Waltz
Administrative Patent Judge) BOARD OF PATENT APPEALS AND INTERFERENCES

Beverly A. Pawlikowski
Administrative Patent Judge)

TJO/eld

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